ABSTRACT OF THE DISCLOSURE

A method of loop detection and dissolution in a communication network including a plurality of nodes, the method comprising: (a) detecting a change in topology of the network by at least one of the plurality of nodes; (b) sending a vote token from the detecting node to each neighbor node, said vote token including an address of the detecting node and number of neighbor nodes of the detecting node; (c) receiving the vote token from the sending node at each of the neighbor nodes from the sending node and: (c1) forwarding the received vote token to all neighbor nodes, if the receiving node has the same or less neighbor nodes then the sending node, and (c2) sending a new vote token to all neighbor nodes if the receiving node has more neighbor nodes then the sending node, the new vote token including the address of the receiving node and number of neighbor nodes of the receiving node; (d) repeating step (c1) and (c2) by each node to which a vote token is either sent or forwarded until one of the nodes receives a token which that node sent and thereby becomes the elected loop-checker node; thereupon a loop-check token is sent by an elected loop-checker to determine which of the ports to "mute" to open the loop.